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EXAMINER

HENEGHAN, MATTHEW E

ART UNIT

PAPER NUMBER

2134

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/944,192

Applicant(s)

WATANABE ET AL.

Examiner

Matthew Heneghan

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In response to the previous office action, Applicant has amended claims 1, 4, 6-12, 15-21, 24, 26-29, 32-36, and 40. Claims 1-40 have been examined.
2. Examination of the instant application has been reassigned to Examiner Matthew Heneghan.

Claim Objections

3. In view of Applicant's amendment, all previous claim objections are withdrawn.

Claim Rejections - 35 USC § 112

4. In view of Applicant's amendment, all previous rejections under 35 U.S.C. 112 are withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, 8, 10, 21-23, 27, 36, 37, 39 and 40 are rejected under 35

U.S.C. 102(e) as being anticipated by Dulude et al., hereafter Dulude (US 6,310,966).

Regarding claim 1, Dulude discloses a person authentication system comprising:

- an entity for executing person authentication (receiver station 42),
- wherein said entity acquires a template from a person identification certificate storing template information (biometric certificate 68) including said template and generated by a third-party agency (registration authority 34) serving as a person identification certificate authority (col. 4, lines 12-65, and col. 6, lines 32-34), and
- executes person authentication on the basis of the acquired decrypted template (col. 6, lines 58-65, and col. 7, lines 33-44).

Regarding claim 2, Dulude teaches all the limitations of claim 1, and further teaches that the person identification certificate authority includes a digital signature written by said person identification certificate authority (biometric certificate 68 contains digital signature 22; Fig. 2; col. 4, lines 55-65).

Regarding claim 3, Dulude teaches all the limitations of claim 1, and further teaches that

said person identification certificate authority verifies the identification of a person requesting a person identification certificate to be issued (col. 5, lines 16-25),

acquires a template serving as person identification data of said person requesting the person identification certificate to be issued (col. 4, lines 25-32), and generates a person identification certificate storing template information including said template (col. 4, lines 55-65).

Regarding claim 6, Dulude teaches all the limitations of claim 1, and further teaches that said entity is any one of a service provider which provides services to a user identified by said person identification certificate, a user device accessed by a user identified by said person identification certificate, and said person identification certificate authority (receiving section 42 is service provider; col. 8, lines 34-45, incorporating Vaeth, US 6035,402; see Vaeth, col. 6, lines 5-26).

Regarding claim 8, Dulude teaches all the limitations of claim 1, and further teaches that

said entity is a service provider which provides services to a user identified by said person identification certificate (receiving section 42 is service provider; col. 8, lines 34-45, incorporating Vaeth, US 6035,402; see Vaeth, col. 6, lines 5-26), and

that said service provider compares a template (registration biometric data 72), which is acquirable from the person identification certificate acquired from said person identification certificate authority (col. 4, lines 55-65, and col. 6, lines 32-34), with sampling information provided by the user (transaction biometric data 46) and starts providing services with the user, provided that said template and said sampling information match with each other (col. 7, lines 33-67).

Regarding claim 10, Dulude teaches all the limitations of claim 1, and further

teaches that said template (registration biometric data) is composed any one of:
biometric information of a person; non-biometric information; any combination of two or more of said biometric information and said non-biometric information; and a combination of any of said information and a password (template composed of biometric information; col. 4, lines 26-32 and 55-57).

Regarding claims 21-23 and 27, these are a method version of the claimed system discussed above (claims 1-3 and 8, respectively), wherein all claim limitations have been addressed. Thus, for the reasons provided above, such claims also are anticipated.

Regarding claims 36 and 37, these are an information-processing-apparatus version of the claimed system discussed above (claims 1 and 2), wherein all claim limitations have been addressed. Thus, for the reasons provided above, such claims also are anticipated.

Regarding claim 39, Dulude teaches all the limitations of claim 1, and further teaches that

that said information processing apparatus compares a template (registration biometric data 72), which is acquirable from the person identification certificate acquired from said person identification certificate authority (col. 4, lines 55-65, and col. 6, lines 32-34), with sampling information provided by the user (transaction biometric data 46) and starts providing services with the user, provided that said template and said sampling information match with each other (col. 7, lines 33-67).

Regarding claim 40, this is a program-providing-medium version of the claimed system discussed above (claim 1), wherein all claim limitations have been addressed. Thus, for the reasons provided above, such a claim also is anticipated.

6. **Claims 1, 9, 21, 24, 28, 36, 38 and 40 are rejected under 35 U.S.C. 102(e)** as being anticipated by Bianco et al., hereafter Bianco (US 6,256,737).

Regarding claim 1, Bianco discloses a person authentication system comprising:

an entity for executing person authentication (computer 208 containing biometric device object 722),

wherein said entity acquires a template from a person identification certificate storing template information (biometric template) including said template and generated by a third-party agency (biometric server 104) serving as a person identification certificate authority (col. 24, lines 21-31),

All information sent from the server, including the template, is encrypted (see column 56, lines 62-65) and must necessarily be decrypted before being used (see column 55, lines 32-35) and

executes person authentication on the basis of the acquired template (col. 24, lines 37-39).

Regarding claim 9, Bianco teaches all the limitations of claim 1, and further teaches

that said entity is a user device serving as a data processing apparatus including data accessible by a user identified by said person identification certificate (computer 208; col. 11, line 66, through col. 12, line 22), and

that said user device compares a template, which is acquirable from the person identification certificate acquired from said person identification certificate authority, with sampling information provided by the user (col. 24, lines 21-43, and col. 25, lines 31-50),

and said user device allows the user to start accessing said user device, provided that said template and said sampling information match with each other (col. 24, lines 40-56).

Regarding claims 21, 24 and 28, these are a method version of the claimed system discussed above (claims 1, 4 and 9, respectively), wherein all claim limitations have been addressed. Thus, for the reasons provided above, such claims also are anticipated.

Regarding claims 36 and 38, this is an information-processing-apparatus version of the claimed system discussed above (claims 1 and 4), wherein all claim limitations have been addressed. Thus, for the reasons provided above, such claims also are anticipated.

Regarding claim 40, this is a program-providing-medium version of the claimed system discussed above (claim 1), wherein all claim limitations have been addressed. Thus, for the reasons provided above, such a claim also is anticipated.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 5, 7, 25 and 26 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Dulude in view of Hughes ("Digital Envelopes and Signatures," InstantDoc #2698, WindowsITPro, September 1996).

Regarding claim 5, Dulude teaches all the limitations of claim 1, but does not explain the further limitation that said person identification certificate authority stores said template in said person identification certificate after encrypting said template.

However, Hughes teaches a method for securing the transmission of a message wherein both the encryption of the message and the digital certificate (signature) for the message sender are employed concurrently for the purpose of providing both privacy and authentication (page 3, paragraph 5).

Therefore, it would be obvious to a person of ordinary skill in the computer art at the time the invention was made to modify the system of Dulude with the teaching of Hughes such that said person identification certificate authority stores said template in said person identification certificate after encrypting said template, particularly where the biometric database 66 which stores the biometric certificate 68 is accessed over a

network connection (col. 5, lines 33-44 and col. 6, lines 32-43). One would be motivated to do so in order to ensure both privacy and authentication in transmission of the biometric certificate over a network.

Regarding claim 7, Dulude teaches all the limitations of claim 1, but does not explain the further limitation that, when transmitting said person identification certificate to said entity, said person identification certificate authority transmits a template which is stored in said person identification certificate, as an encrypted template which is decryptable only by said entity to which said person identification certificate is to be transmitted.

However, Hughes teaches a method for securing the transmission of a message wherein both the encryption of the message and the digital certificate (signature) for the message sender are employed concurrently for the purpose of providing both privacy and authentication (page 3, paragraph 5), and wherein the encrypted message is decryptable only by the entity to which the certificate is to be transmitted (page 2, paragraph 2).

Therefore, it would be obvious to a person of ordinary skill in the computer art at the time the invention was made to modify the system of Dulude with the teaching of Hughes such that, when transmitting said person identification certificate to said entity, said person identification certificate authority transmits a template which is stored in said person identification certificate, as an encrypted template which is decryptable only by said entity to which said person identification certificate is to be transmitted, particularly where the biometric database 66 which stores the biometric certificate 68 is

accessed over a network connection (col. 5, lines 33-44 and col. 6, lines 32-43). One would be motivated to do so in order to ensure both privacy and authentication in transmission of the biometric certificate over a network.

Regarding claims 25 and 26, this is a method version of the claimed system discussed above (claims 5 and 7), wherein all claim limitations have been addressed. Thus, for the reasons provided above, such claims also would have been obvious.

8. **Claims 4 and 11 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Bianco in view of Diffie et al., hereafter Diffie, ("Authentication and Authenticated Key Exchanges," Designs, Codes and Cryptography, Kluwer Academic Publishers, 1992).

Regarding claim 4, Bianco teaches all the limitations of claim 1, and further teaches that said person identification certificate authority transmits the person identification certificate to said entity (col. 24, lines 21-32).

Although Bianco teaches that the transmission of the certificate between said person identification certificate authority and said entity is encrypted using an asymmetric public key protocol (col. 55, lines 29-57, and col. 56, lines 52-65), Bianco does not explain that in the process of acquiring the person identification certificate from said person identification certificate authority, said entity performs mutual authentication between said entity and said person identification certificate authority, and said person identification certificate authority transmits the person identification certificate provided that said mutual authentication is successfully completed.

However, Diffie teaches a method of two-party mutual authentication wherein the parties exchange digital signatures (page 9, first paragraph) in addition to their public cryptographic keys for the purpose of enhancing security by assuring that each of the parties exchanging a public key is authentic and not an imposter (page 2, paragraph 3).

Therefore, it would be obvious to a person of ordinary skill in the computer art at the time the invention was made to modify the system of Bianco with the teaching of Diffie such that in the process of acquiring the person identification certificate from said person identification certificate authority, said entity performs mutual authentication between said entity and said person identification certificate authority, and said person identification certificate authority transmits the person identification certificate provided that said mutual authentication is successfully completed. One would be motivated to do so in order to enhance network security by assuring that each of the parties exchanging a public key is authentic and not an imposter.

Regarding claim 11, Bianco teaches all the limitations of claim 1, and further teaches

that said entity and said person identification certificate authority have an encryption processing unit, respectively, (col. 56, lines 58-65).

But Bianco does not explain that when data is transmitted between said entity and said person identification certificate authority, mutual authentication is performed, a data-transmitting party generates a digital signature and adds it to data to be transmitted, and a data-receiving party verifies the digital signature.

However, Diffie teaches a method of two-party mutual authentication wherein the parties exchange digital signatures (page 9, first paragraph) in addition to their public cryptographic keys for the purpose of enhancing security by assuring that each of the parties exchanging a public key is authentic and not an imposter (page 2, paragraph 3).

Therefore, it would be obvious to a person of ordinary skill in the computer art at the time the invention was made to modify the system of Bianco with the teaching of Diffie such that when data is transmitted between said entity and said person identification certificate authority, mutual authentication is performed, a data-transmitting party generates a digital signature and adds it to data to be transmitted, and a data-receiving party verifies the digital signature. One would be motivated to do so in order to enhance network security by assuring that each of the parties exchanging a public key is authentic and not an imposter.

9. **Claims 12-14, 20 and 29-31 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Yu et al. al., hereafter Yu (US 5,930,804), in view of Dulude.

Regarding claim 12, Yu discloses a person authentication system comprising:
a person identification certificate authority (authentication center 24 containing biometric server 42) which acquires a template (stored biometric data),
executes person authentication on the basis of said acquired template (col. 11, lines 5-13), and
issues a verification certificate, provided that said person authentication is successfully passed (col. 11, lines 66-67, and col. 12, lines 33-43).

But Yu does not explain that the person identification certificate authority acquires the template from a person identification certificate storing template information including said template.

However, Dulude teaches an authentication system wherein a template (registration biometric data 20) is stored within a person identification certificate (biometric certificate 68; Fig. 2; col. 4, lines 55-65; col. 5, lines 33-35) for the purpose of facilitating increased security and accuracy in the authentication of electronic transactions by binding the biometric identification of consumers with digital certificates (col. 3, lines 28-34).

Therefore, it would be obvious to a person of ordinary skill in the computer art at the time the invention was made to modify the system of Yu with the teaching of Dulude such that the person identification certificate authority acquires the template from a person identification certificate storing template information including said template. One would be motivated to do so in order to facilitate increased security and accuracy in the authentication of electronic transactions by binding the biometric identification of consumers with digital certificates.

Regarding claim 13, the modified invention of Yu and Dulude is relied upon as applied to claim 12, and Yu further teaches that the verification certificate issued by said person identification certificate authority includes a digital signature written by said person identification certificate authority (Yu, col. 12, lines 36-57).

Regarding claim 14, the modified invention of Yu and Dulude is relied upon as applied to claim 12, and Yu further teaches that

said person identification certificate authority acquires a template serving as person identification data of said person requesting the person identification certificate to be issued (col. 9, lines 54-63).

But Yu does not explicitly explain that said person identification certificate authority verifies the identification of a person requesting a person identification certificate to be issued and that said person identification certificate authority generates a person identification certificate storing template information including said template.

However, Dulude teaches an authentication system wherein said person identification certificate authority verifies the identification of a person requesting a person identification certificate to be issued (col. 5, lines 15-25) and wherein a person identification certificate authority (registration authority 34) generates a person identification certificate (biometric certificate 68) storing template information (registration biometric data 20) including said template (Fig. 2; col. 4, lines 55-65) for the purpose of facilitating increased security and accuracy in the authentication of electronic transactions by binding the biometric identification of consumers with digital certificates (col. 3, lines 28-34).

Therefore, it would be obvious to a person of ordinary skill in the computer art at the time the invention was made to modify the modified invention of Yu and Dulude as applied to claim 12 with the further teaching of Dulude such that said person identification certificate authority verifies the identification of a person requesting a person identification certificate to be issued and that said person identification certificate authority generates a person identification certificate storing template information

including said template. One would be motivated to do so in order to facilitate increased security and accuracy in the authentication of electronic transactions by binding the biometric identification of consumers with digital certificates.

Regarding claim 20, the modified invention of Yu and Dulude is relied upon as applied to claim 12, and Yu further teaches that said template is composed of any one of: biometric information of a person; non-biometric information; any combination of two or more of said biometric information and said non-biometric information; and a combination of any of said information and a password (biometric data; col. 9, lines 54-67, and col. 10, lines 61-67).

Regarding claims 29-31, this is a method version of the claimed system discussed above (claims 12-14), wherein all claim limitations have been addressed. Thus, for the reasons provided above, such claims also would have been obvious.

Response to Arguments

10. Applicant is thanked for pointing out the obvious typographical errors in the previous office action, specifically in referring to the "Dulude" reference as "Duluth." It is agreed that the cited reference is "Dulude," whereas "Duluth" is well-known in the art to be the home of the largest seaport in the great state of Minnesota.

11. Applicant's arguments filed 28 September 2005 have been fully considered but they are not persuasive.

The grounds of rejection regarding the independent claims have been modified in view of Applicant's amendments to the claims.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation stated in the office action is merely a rephrasing of the motivation stated in the Hughes reference. One skilled in the art at the time the invention was made would clearly recognize the motivation to incorporate Hughes' archiving functionality into Dulude's invention based upon the reasons stated in the cited paragraph of Hughes.

Conclusion

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12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Heneghan, whose telephone number is (571) 272-3834. The examiner can normally be reached on Monday-Friday from 8:30 AM - 4:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse, can be reached at (571) 272-3838.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450

Or faxed to:

(571) 273-3800

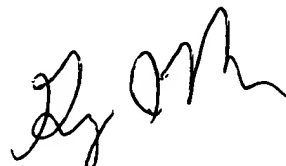
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MEH



December 16, 2005


GREGORY M. HISE
SUPERVISOR, PATENT EXAMINER
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